- 4. The method of claim 1,
- wherein the communications occur on both an inbound channel and an outbound channel, and
- wherein the monitoring, comparing, and performing steps are done for both the inbound channel and the outbound channel.
- 5. The method of claim 1, wherein the monitoring step comprises the step of
 - monitoring the parameter selected from a group of parameters consisting of a bit error rate, a received signal strength indication, a carrier-to-interference ratio, a carrier-to-noise ratio, a carrier-to-interference plus noise ratio, whether a hand-off succeeds, whether one of the communications is interrupted, latency, delay spread, neighboring power levels, a battery parameter, a capacity overload, and number of retries required to establish contact.
- 6. The method of claim 1, wherein the adding step comprises the step of
 - recording in the communication difficulty report a value of at least one additional parameter monitored during the communications to help determine a cause for the communication difficulty.
- 7. The method of claim 1, further comprising in the $_{25}$ portable subscriber unit the steps of:
 - determining that the record of communication difficulty reports contains a number of communication difficulty reports, the number having reached a predetermined maximum; and
 - communicating the record of communication difficulty reports to the fixed portion in response to the number having reached the predetermined maximum.
- 8. The method of claim 1, further comprising in the portable subscriber unit the steps of:
 - receiving a request from the fixed portion to monitor and report a signal quality when entering a pre-defined geographic zone; and
 - monitoring and reporting the signal quality when entering the pre-defined geographic zone.
- 9. The method of claim 1, further comprising in the fixed portion of the wireless communication system the steps of:
 - generating a special report when the record of communication difficulty reports indicates that a capacity overload has occurred.
- 10. A portable subscriber unit in a two-way wireless communication system for detection and deferred reporting of a communication difficulty and a location at which the communication difficulty occurred, the portable subscriber 50 unit comprising:
 - a receiver for receiving a first communication from a fixed portion of the two-way wireless communication system;
 - a processing system coupled to the receiver for processing 55 the first communication; and
 - a transmitter coupled to the processing system for transmitting a second communication to the fixed portion,
 - wherein the processing system is programmed to:

- monitor a parameter indicative of communication quality during at least one of the first and second communications.
- compare the parameter with a predetermined threshold; and
- when the communication quality deteriorates such that the parameter reaches the predetermined threshold: determine geographic coordinates corresponding to the location at which the communication difficulty occurred; and
 - add a communication difficulty report to a record of communication difficulty reports stored in the processing system, the communication difficulty report identifying the parameter and the geographic coordinates, and
- wherein the processing system is further programmed to: receive a request for the record of communication difficulty reports from a fixed portion of the two-way wireless communication system; and
 - communicate the record of communication difficulty reports to the fixed portion in response to the request.
- 11. The portable subscriber unit of claim 10, wherein the processing system is further programmed to time-stamp the communication difficulty report.
- 12. The portable subscriber unit of claim 10, wherein the processing system is further programmed to
 - monitor the parameter selected from a group of parameters consisting of a bit error rate, a received signal strength indication, a carrier-to-interference ratio, a carrier-to-noise ratio, a carrier-to-interference plus noise ratio, whether a hand-off succeeds, whether one of the communications is interrupted, latency, delay spread, neighboring power levels, a battery parameter, a capacity overload, and number of retries required to establish contact.
- 13. The portable subscriber unit of claim 10, wherein the processing system is further programmed to
 - record in the communication difficulty report a value of at least one additional parameter monitored during the communications to help determine a cause for the communication difficulty.
- 14. The portable subscriber unit of claim 10, wherein the processing system is further programmed to:
 - determine that the record of communication difficulty reports contains a number of communication difficulty reports, the number having reached a predetermined maximum; and
 - communicate the record of communication difficulty reports to the fixed portion in response to the number having reached the predetermined maximum.
- 15. The portable subscriber unit of claim 10, wherein the processing system is further programmed to:
 - receive a request from the fixed portion to monitor and report a signal quality when entering a pre-defined geographic zone; and
 - monitor and report the signal quality when entering the pre-defined geographic zone.

* * * * *